What is claimed is:

1. (original) A method for inspecting the surfaces of a three-dimensional body (2), with which at least one camera and at least one illuminating device are moved relative to the surface of the object, pictures are taken of the areas to be inspected on the surface during the movement of the camera relative to the surface, and the pictures are transmitted to a computer (11) and are evaluated therein,
wherein
the camera, illumination device and the surface are brought into at least one defined geometric relationship with each other during the inspection of each area to be inspected on the surface, at least for period required to take a picture.

2. (original) The method as recited in Claim 1,
wherein
the camera, illumination device and the surface are brought into several different defined geometric relationships with each other during the inspection of each area to be inspected on the surface, at least for the period of time required to take a picture.

3. (currently amended) The method as recited in Claim 1 ~~or 2~~,
wherein
the defined geometric relationship is determined by the angle between the surface normals of the area to be inspected, the illumination and the camera and/or by the distance between the surface of the area to be inspected and the illumination and/or the camera.

4. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
different-sized areas to be inspected are selected depending on the curvature of the surface.

5. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
the camera, illumination device and/or body (2) with the surface to be inspected are movable in one or more degrees of freedom.

6. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
the illumination takes place in a diffuse, directed or structured manner, as sustained illumination and/or flash illumination.

7. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
the illumination is alternating dark and/or bright field illumination and/or – preferably directed – two-dimensional illumination.

8. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
several pictures are taken of an area on a surface to be inspected under various illumination situations and/or with different camera settings.

9. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
several cameras and several illumination devices are combined to form at least two subsystems (6, 7) that are movable relative to the surface to be inspected, subsystems (6, 7) being interconnected via a communication interface, and the inspection result being created by evaluating the images of several or all of the subsystems (6, 7).

10. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
the evaluation of the pictures that were taken are evaluated using image-evaluation algorithms stored in a computer system.

11. (original) The method as recited in Claim 10,
wherein
specifiable structures are excepted from detection as defects during the inspection.

12. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
the relative position between the surface to be inspected and the camera and/or the illumination device is detected, and the picture is taken such that it is controlled via resolution, position and/or time in accordance with the relative position.

13. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1,
wherein
specifiable areas to be inspected on the surface are examined with different settings in the geometric relationship, the illumination situation and/or in image-processing parameters.

14. (currently amended) A system for inspecting surfaces of a three-dimensional object, in particular for carrying out the method as recited in ~~one of the Claims 1 through 13~~ Claim 1, with at least one camera for taking pictures of the areas to be inspected on the surface, and at least one illumination device, with at least one displacement device (9, 10) that moves the camera, illumination device and body (2) relative to each other, and with an evaluation unit (11) for

evaluating the pictures that were taken, characterized by a control device (12) set up such that the camera, illumination device and surface are in at least one defined geometric relationship with each other during the inspection of every area to be inspected on the surface, at least for the period of time required to take a picture.

15. (original) The system as recited in Claim 14,
wherein
at least one camera and at least one illumination device are located in a single inspection unit (3, 4).

16. (currently amended) The system as recited in Claim 14 ~~or 15~~,
wherein
several cameras and illumination devices and inspection units (3, 4) each represent separate subsystems (6, 7).

17. (original) The system as recited in Claim 16,
wherein
at least one stationary (6) and one movable (7) subsystem are provided.

18. (currently amended) The system as recited in ~~one of the Claims 14 through 17~~ Claim 14,
wherein
the cameras are calibrated three-dimensionally.

19. (currently amended) The system as recited in ~~one of the Claims 14 through 18~~ Claim 14,
wherein
the cameras are calibrated with reference to the illumination devices, the object and or displacement devices.